Informing body checking policy in youth ice hockey in Canada: A discussion meeting with researchers and community stakeholders

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Abstract

Body checking is the most consistent risk factor for injury, severe injury, and concussion in youth ice hockey**.** In North America, body checking has typically been allowed starting in the Pee Wee age group (11-12 years old), but it has been shown that Pee Wee players in body checking leagues are at significantly greater risk of injury compared to those in non-body checking leagues. Based on this evidence, Hockey USA implemented a national policy change in 2011 to increase the age of body checking introduction. In Canada, dissemination of research evidence alone was insufficient to drive national policy change. There was considerable public debate around the issue, and hockey governing bodies across the country were at varying stages of readiness to institute policy change. This paper discusses an example of the knowledge exchange process that occurred between researchers and community stakeholders to inform local, provincial, and national policy discussion. This meeting took place in April 2013, prior to a series of provincial and national votes, with the goal of informing the decision-making process. Three major factors that can drive policy change in the sport safety context were identified: the need for decision-making leadership, the importance of knowledge translation, and the role of sport culture as a barrier to change. These highlight the critical need for researcher and stakeholder partnership in facilitating ongoing policy discussion and informing evidence-based policy change.

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INTRODUCTION

Body checking is the most consistent risk factor for injury, severe injury, and concussion in youth hockey.[1-3] Body checking, defined as a tactic used to gain an advantage on the opponent with the use of the body, occurs when a player makes no attempt to play the puck and intentionally plays the body of the opponent; changes direction or leaves the established skating lane to play the body of the opponent; or uses hips, shoulders, or arms to push off and separate the opponent from the puck. It differs from body contact, which is contact that occurs between opponents during the normal process of playing the puck, providing there has been no overt hip, shoulder or arm contact to physically force the opponent off the puck and players maintain established skating lanes and body positioning.[4,5]

In North America, body checking has typically been allowed starting in the Pee Wee age group (age 11-12). In recent years, however, public concern about the risk of injury (particularly concussion) in hockey and the amassed body of evidence regarding injury risk factors [3] necessitated that hockey governing bodies review their policies regarding body checking in youth leagues. The resulting debate involved administrators, coaches, parents, players, and other members of the

hockey community, with arguments both for and against allowing body checking at the Pee Wee level.

In 2010 and 2011, two landmark studies were published that provided evidence that Pee Wee players in body checking leagues are at a three-fold greater risk of injury and a four-fold greater risk of concussion, compared to those in non-body checking leagues.[1] Furthermore, learning to body check in Pee Wee provides limited protective effect when players graduate to the Bantam age group (age 13-14).[2] This evidence prompted USA Hockey to institute a nationwide policy change in the 2011-2012 season, whereby body checking was removed from Pee Wee at all competitive levels. The purpose of this change was to (1) allow players an additional two years to develop the fundamental skills of skating, puck control, passing, shooting, and position play without the distraction of body checking, which might impede a player's natural development; (2) ensure the safest possible playing environment for youth athletes; and (3) allow players two more years of body checking skill development in practice.[6]

In Canada, the body checking issue was highly controversial. In 2010, Hockey Canada set the minimum national age of introduction to Pee Wee, with no exceptions, but encouraged regional jurisdictions to increase the starting age at their discretion. Individual associations were also free to restrict body checking to specific competitive levels (e.g., elite only). As of the 2012-2013 season, Hockey Quebec was the only provincial branch that delayed body checking until Bantam across all skill levels, on a platform of player safety and better skill training. In 2011, the Ontario Hockey Federation and some associations in British Columbia decided

to allow body checking in only the most elite levels (top 30% by division of play) in Pee Wee, Bantam and Midget (ages 11-17).

Recognizing that dissemination of research evidence alone was insufficient to drive national policy change in Canada, a one-day policy discussion meeting was held in April 2013 to facilitate knowledge exchange between researchers and community stakeholders. At the time of the meeting, Hockey Canada was not entertaining a vote on national body checking policy. Three provincial hockey branches and some regional associations were planning body checking policy votes in the weeks following the meeting.

MEETING FORMAT

Stakeholder interests were represented by 28 individuals from four Universities (three Canadian and one American) and 15 organizations; Hockey Canada, USA Hockey, BC Hockey, Hockey Quebec, Hockey Calgary, Hockey Edmonton, Okanagan Mainline Amateur Hockey Association, Pacific Coach Amateur Hockey Association, Mayo Clinic Sports Medicine Center, Canadian Paediatric Society, Parachute, Alberta Centre for Injury Control and Research [ACICR], Safer Hockey in Canada, Rick Hansen Institute, and Max Bell Foundation. Two invited youth hockey associations did not attend. A neutral Chair from the Canadian Centre for Ethics in Sport moderated the discussion. The meeting was supported by the Max Bell Foundation, which is a "Canadian independent granting organization that supports the development of innovative ideas that impact public policies and

practices with an emphasis on health and wellness, education, and the environment." [7]

Researchers and stakeholders presented current perspectives on evidence and policy change, and discussion focused on an a priori set of questions. During the meeting, participants recorded their organization's views on each of the discussion points. These responses were aggregated and coded to allow the identification of emerging themes. The proceedings of the meeting were also audio recorded to support the written responses.

FEEDBACK

What are the perspectives of your organization regarding body checking policy in youth hockey?

All hockey association representatives acknowledged that, based on recent evidence and public pressure, there was a need for body checking policy discussion. Representatives from two associations indicated that evidence related to injury risk was sufficient to prompt body checking policy change at the Pee Wee level. Another representative suggested that additional review of the evidence and better public education were necessary before addressing current policy.

Consistent with a recently published position paper [8], advocacy groups and researchers unanimously held the perspective that body checking should be introduced no earlier than Bantam, and should be removed entirely from recreational and sub-elite leagues in all youth age groups. Additionally, some

representatives suggested that a more conservative approach be considered in delaying body checking to older players (>16 years).

What are the perspectives of your organization regarding the current evidence related to body checking policy in youth hockey?

There was agreement that evidence pertaining to body checking age was valid, consistent, and supported delaying introduction until Bantam; however, those representing associations that had not yet held a policy vote indicated that the official position of their organizations was to follow the Hockey Canada mandate of introduction in Pee Wee.

Few associations had restricted body checking to specific levels of play. Parent representatives felt there was sufficient evidence to remove body checking at all levels of competition. Conversely, most associations supported removing body checking from sub-elite leagues, but were reluctant to enforce change at elite levels.

Evidence regarding body checking skill training was deemed insufficient. Hockey Canada had developed a four-step process to teach body checking skills, and resources to support this process were available to associations and coaches.[3] Associations and advocacy groups supported this progressive introduction, but no organization currently enforced the process.

Association representatives expressed concern regarding a lack of knowledge translation between researchers and the grassroots hockey community. They believed that administrators were “getting the message” about the evidence, but this information was not reaching parents and players.

Are there gaps in the research that need to be evaluated before considering future body checking policy change in youth hockey?

A need for additional evidence regarding injury risk in Bantam and Midget (15-17 year old) age groups was expressed by most representatives, as was a need for longitudinal data concerning injury consequences (including drop-out from sport). Understanding the long-term impacts of concussion was highlighted as a crucial next step.

Associations were concerned with the effect of policy change on skill acquisition and on-ice performance. Considering that one of the platforms of the USA Hockey policy change was greater skill development, it was suggested that this outcome be assessed prospectively.

A paucity of information about coaching practices and the validity of the Hockey Canada model of body checking education was discussed. Additionally, the influence of referee game management, rule interpretation, and injury risk awareness were identified as areas lacking in evidence. Information regarding the economic impact of hockey injuries was also deemed essential to inform policy decisions.

Which factors can drive body checking policy change and how could change be implemented to ensure success?

Several factors were identified, including increased public knowledge about injury risk and a unified communication strategy to ensure stakeholders were

"speaking the same language." There was a prevailing belief that governing bodies should provide "active and visible" leadership, and that the executives of these organizations would need to feel empowered, through public support, to make policy decisions. Advocacy for policy change by parents and other stakeholders was viewed as a powerful driver of change.

Additional factors included decreased social norming around the role of body checking in youth hockey, trends toward declining enrollment, health care costs associated with injury, and legal issues surrounding injury liability. It was suggested that the successful Hockey Quebec and USA Hockey experiences could help prompt change, although connecting skill development and safety would be important:

> *"You can only go so far with a negative message or avoiding the negative. It's much better, if you can, to package it in a positive way… To the extent that we can package this in a way that's performance-oriented and development-oriented, that will have the intended safety consequence... The perceived benefit can't just be the benefit of avoiding an injury, it should be the benefit of developing a better player."*
>
> *– University researcher*

Are there facilitators that may assist change?

The need for leadership was endorsed unanimously, and public concern over the potential long-term consequences of concussion was seen as a source of

pressure that could drive change. Advocacy by recognizable figures, such as professional players or media personalities, was also suggested for promoting awareness and public support:

> *"I think one of the factors that can help drive change is getting elite players, very recognizable players from the National Hockey League [NHL], Olympians, coaches of those national and NHL teams to support this initiative… If we can get the elite players that everyone wants their child to be like – I think we need to connect the dots with those people that have reached that level of play to endorse this."*
>
> *– Governing body representative*

What are the barriers to change, and how can they be overcome?

Responsibility for initiating policy change was addressed as a major barrier. Although policy was under the purview of provincial branches and regional associations, there was considerable pressure for Hockey Canada to take a national lead on the issue. Associations expressed concern that if they enacted a policy change, they would be "the only one," preventing their teams from competing in tournaments or provincial competitions against teams from jurisdictions where body checking was still allowed. These associations were reluctant to place players at a competitive or developmental disadvantage:

"The local organizations don't want to change for fear of being the only ones who change, and yet Hockey Canada will only make a change if the local organizations come forward. So it turns into kind of a circular argument… How do we make everyone feel like this is their problem? It seems like for every level of hockey organization, the responsibility for [body checking policy decisions] lies at a different level."

– University researcher

Another barrier was that most administrators and coaches in Canadian youth hockey are volunteers, and it was believed that these individuals were provided with inadequate injury prevention training. Several individuals suggested that greater accountability for player safety be placed on these individuals, although as volunteers they may not feel capable of driving change or disseminating injury information. Furthermore, association representatives reported that it was challenging to balance parent and player expectations of performance with on-ice safety, particularly as it related to body checking.

Social context was also identified as a barrier. It was noted that public opinion about body checking is often formed on anecdote instead of evidence, and the benefits and consequences of policy change were being weighted on hockey tradition instead of player safety. Constant exposure to professional hockey was viewed as an influencing factor, specifically around the acceptance of body checking behaviour. Media glorification of the "big hit" was deemed to reinforce this attitude.

While representatives acknowledged that body checking is a necessary skill for those aspiring to professional careers, the majority of youth players will not go on to play in these leagues:

> *"The only reason an individual has to learn how to body check – it's not for a lifetime of competitive hockey – it's simply if you are going to go on into a professional or semi-professional [varsity] career."*
>
> *– Advocacy group representative*

What are the anticipated outcomes following change?

Decreased injury risk was believed to be the most important outcome of policy change. Other potential benefits included better skill development, greater (lifelong) participation in hockey, reduction in health care costs, and more fun for recreational athletes. Although some negative consequences were expected, such as initial public dissatisfaction, most believed this would be short-lived. From a financial perspective, however, the costs associated with greater injury/concussion education alongside a policy change were viewed as a potential problem. It was also indicated that increasing enrollment and greater long-term participation would put additional stress on already overburdened facilities:

> *"If we are successful and outcomes are that (1) kids stay in the game longer, and (2) that we attract more players… that's just*

going to add to not only [the youth] pool of athletes, but that in the adult game. I'm sure every large urban organization is already feeling significantly pinched that way."

– Hockey association representative

What factors contribute to policy discussion in your organization?

Association representatives noted that, although injury evidence was a foundation for discussion, it was not the driving force behind ongoing debate. Media coverage of concussion incidents and policy change was perceived as highly persuasive, but it was seen as both helpful and detrimental. In some cases it was argued that evidence for and against body checking was portrayed as more balanced than it actually was. There was also comment upon the incongruous messages being delivered by the media, whereby they promoted safety in youth hockey while celebrating "hard hitting" professional games. Popular media was viewed as a crucial method of communicating evidence to parents and players, but framing of the message was believed to impact public perception of the issues.

Perspectives varied on the role of elite hockey development in the policy debate. Some associations indicated that elite groups received balanced consideration in policy discussion, but others found this to be disproportionate. Association representatives highlighted the need to balance safety with their responsibility to provide elite players with necessary skill development. Although this was acknowledged as a significant barrier to change, it was also proposed to be facilitator. Specifically, concern over losing elite players prematurely due to

concussion, and coaches not selecting players with a concussion history, could be a powerful motivator for improved safety.

POLICY IMPLICATIONS

Three major themes emerged during the meeting: (1) need for leadership; (2) knowledge translation; and (3) hockey culture as a barrier to change.

Difficulties surrounding leadership were primarily related to ownership over policy decisions. Although Hockey Canada clearly placed decision-making in the hands of its branches, associations felt that body checking policy should be championed at the national level. Dissonance between the bottom-up Hockey Canada approach and the top-down directive sought by the community was a major source of conflict. Stakeholders expressed frustration that enacting policy change was more of a "process problem" than an "information problem."

The need for a comprehensive communication strategy was discussed. There was an identified need to ensure that accurate and current information was provided to stakeholders, but messages would have to use consistent language and properly define terms (e.g., body contact versus body checking) to be effective. Moreover, integrating evidence into policy discussion was challenging because many stakeholders preferred ideology, anecdotal evidence, and personal experience to inform their positions. Research evidence would therefore need to be made accessible and meaningful to end-users.

The development of body checking resources was identified as a priority. Ensuring that coaches received standardized training to teach body checking and

that officials were able to properly identify legal and illegal forms of contact would be key in enforcing policy change. Evaluation of knowledge exchange strategies would be important, but representatives believed that mandating the use of Hockey Canada body checking training materials was a good approach to immediately translate evidence into practice.

Hockey culture was seen as a contextual factor affecting all aspects of the decision-making process. The prevailing public belief that "the game cannot change" was discussed as an impediment to progress. Advocacy groups in particular argued that, due to the cultural importance of hockey in Canada, many parents were intimidated by the environment and were afraid to take a stance against body checking. Parents were also viewed as contributing to policy inertia through unreasonable expectations of their children's participation in hockey. Placing performance goals ahead of player safety and the belief that body checking will "toughen kids up" were considered barriers to gaining public support for policy change.

OUTCOMES

An action item resulting from the meeting was the preparation of a two-page research brief (Appendix A) for hockey associations to present at their upcoming annual general meetings. This was constructed with input from researchers and community stakeholders. Several associations used this brief to inform board members prior to voting on body checking policy.

Subsequent to the Whistler policy discussion meeting, several provincial branch votes occurred between April-May 2013, with Alberta, Nova Scotia, and Ontario deciding to delay body checking until Bantam (age 13-14) across all levels of play. In June 2013, the Hockey Canada Board of Directors voted to enact a national policy disallowing body checking in Pee Wee. The focus of Hockey Canada continues to be the appropriate and timely development of body checking skills such that players are prepared appropriately for body checking in Bantam.

CONCLUSIONS

There was a critical need for researcher and stakeholder partnership in informing evidence-based policy change in youth hockey. The engagement of stakeholders over several years was imperative to inform the research agenda, maximize public and media involvement, and to facilitate ongoing policy discussion. This meeting represented a final stage of knowledge exchange that informed discussion and voting processes that led to a policy change that will have long-term impact in reducing the risk of concussion and injury in youth hockey players.

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CONTRIBUTORS

CAE and WHM were responsible for the initiation of the policy discussion meeting. CDM conducted all analyses of the written and recorded participant responses and wrote the first draft of the manuscript. All authors and acknowledged collaborators contributed to the interpretation of the findings and critical revision of the manuscript.

COMPETING INTERESTS

None.

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